REMARKS/ARGUMENTS

The Office Action mailed September 14, 2006, has been received and reviewed. Claims 1 through 13, 49, 50, 52 through 69, 91, and 93 through 130 are currently pending in the application. Claims 5, 10 through 12, 56, 61, 64 through 68, 93 through 98, and 100 are withdrawn from consideration as being drawn to a non-election invention. Claims 1 through 4, 6 through 9, 13, 49, 50, 52 through 55, 57 through 60, 69, 91, 99, and 101 though 113 stand rejected. Claim 114 through 130 are allowed and claims 62 and 63 have been objected to as being dependent upon rejected base claims. The indication of allowable subject matter in such claims is noted with appreciation.

Per this response, Applicants have amended claims 1, 2, 49, 50, 62, 91, 94, 101, 102, 107, 109, 110 and 115, and have cancelled claims 52, 53, 95 and 96. Applicants respectfully request reconsideration of the application as amended herein.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 5,050,892 to Kawai et al.

Claims 1 through 3, 6 through 8, 49, 50, 52 through 55, 57 through 60, and 69 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kawai et al. (U.S. Patent No. 5,050,892). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1 through 3 and 6 through 8

Independent claim 1 of the presently claimed invention is directed to a sleeve element for sealing between a piston element surface and a bore surface disposed thereabout. As amended herein, the sleeve element of claim 1 comprises: a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface*

oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface; wherein at least a portion of the first end region of the substantially annular body is configured to be biased laterally in a first direction into at least one recess formed in one of the piston element surface and the bore surface; at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region *and longitudinally spaced from the bearing surface,* the at least one sealing feature being configured to be biased laterally into the at least one recess, the at least one sealing feature sized and configured to sealingly engage against a portion of the same surface that the bearing surface is configured to conformally engage; and at least one depression formed in at least one of the outer surface and the inner surface of the substantially annular body, wherein at least a portion of the at least one depression is sized, located and configured to lie over the at least one recess to provide increased lateral flexure for the biasing of the at least a portion of the first end region into the at least one recess, the at least one depression positioned proximate to the at least one sealing feature.

The Examiner cites Kawai disclosing a sleeve element that comprises:

> a substantially annular body (Fig. 5) including an inner surface, an outer surface, a first end region (region at left most element 14), and a second end region (region at right most element 14);
>
> wherein at least a portion of the first end region of the annular body is configured to be biased laterally into a recess (recess formed with surface 21);
>
> at least one sealing feature (14); and
>
> at least one depression (13) wherein at least a portion of the at least one depression is sized, located and configured to lie over the at least one recess (Fig. 6) to provide increased flexure for the biasing of the at least a portion of the first end region into the at least one recess (Fig. 6), the at least one depression positioned proximate to the at least one sealing feature (Fig. 6). (Office Action, pages 2 and 3).

However, Applicants submit that Kawai fails to describe all of the limitations of the presently claimed invention.

Kawai describes a sealing arrangement for a piston in a compressor. The sealing arrangement includes a sealing ring (10) made of a plastic material in the form of a discontinuous ring having opposite ends. (Col. 3, lines 63-67). The sealing ring includes an outer cylindrical portion (11) including the main sealing outer surface (13). Flexible lip portions (14) are arranged on either end of the outer cylindrical portions to contact the bore surface. (Col. 4, lines 48-55).

However, Kawai fails to describe a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface.*

The Examiner points to the "surface elements 14 in contact with the bore surface 30a" as constituting a bearing surface. Assuming that such elements constitute a bearing surface, then Kawai clearly fails to teach that *the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface*. With respect to Kawai, the other surface of the inner and outer surface (i.e., the inner surface in the embodiment shown by Kawai, based on the Examiner's identification of an asserted bearing surface),is not sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface (i.e., the piston bore surface, again based on the Examiner's characterization of Kawai) as is clear from FIGS. 2 and 6.

Applicants further submit that Kawai fails to describe at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region *and longitudinally spaced from the bearing surface*.

As such, Applicants submit that claim 1 is clearly allowable over Kawai. Applicants further submit that claims 2, 3 and 6 through 8 are also allowable as being dependent from an allowable base claim as well as for the additional patentable subject matter introduced thereby.

With respect to claim 2, Applicants submit that Kawai fails to describe the sleeve element of claim 1, wherein the at least one sealing feature that includes a surface protruding radially in a second direction, opposite the first direction, beyond a radial extent of the bearing surface.

Applicants respectfully request reconsideration and allowance of claims 1 through 3 and 6 through 8.

Claims 49, 50, 52 through 55, 57 through 60 and 69

Independent claim 49 is directed to a seal assembly for sealing between a piston element and a bore surface disposed thereabout. As amended herein, the seal assembly of claim 49 comprises: a piston element having a surface; a sleeve element positioned between the piston element surface and a bore surface disposed thereabout, the sleeve element having an inner surface, an outer surface, a first end region, and a second end region, wherein the sleeve element is configured as a continuous substantially annular ring; a first recess formed in the piston element surface; and at least one depression formed in at least one of the outer surface and the inner surface of the sleeve element, at least a portion of the at least one depression being sized, located and configured to lie over the first recess; wherein at least a portion of the first end region of the sleeve element is laterally adjacent to the first recess and configured to be biased laterally thereinto; and *a first energizer positioned generally within the first recess, the first energizer configured to contact at least a portion of the inner surface of the sleeve element*; wherein the sleeve element includes a first sealing feature extending from the outer surface thereof, proximate to the at least a portion of the first end region configured to be biased laterally into the first recess, the first sealing feature configured to sealingly engage against the bore surface.

The Examiner relies on Kawai as disclosing all of the limitations of claim 49. (See, Office Action, page 4). The teachings of Kawai are discussed hereinabove with respect to claim 1.

Applicants submit that Kawai fails to describe all of the limitations of claim 49 as presently amended. For example, Applicants submit that Kawai fails to describe *a first energizer positioned generally within the first recess, the first energizer configured to contact at least a portion of the inner surface of the sleeve element*. Indeed, Applicants submit that, other that the sealing ring (10) itself, Kawai fails to disclose any other structure disposed within the ring groove (25).

Applicants, therefore, submit that claim 49 is clearly allowable over Kawai. Applicants further submit that claims 50, 52 through 55, 57 through 60 and 69 are also allowable as being dependent from an allowable base claim as well as for the additional patentable subject matter introduced thereby.

With respect to claim 55, Applicants submit that Kawai fails to describe a seal assembly wherein the *inner surface of the sleeve element* fits *interferingly* against *the surface of the piston element*. While the Examiner cites Col. 5, lines 57-61 of Kawai as disclosing "the sleeve element on the surface of the piston element" (Office Action, page 5), Applicants fail to find the claimed subject matter described by the cited portion of Kawai.

Applicants, therefore, respectfully request reconsideration and allowance of claims 49, 50, 52 through 55, 57 through 60 and 69.

Anticipation Rejection Based on U.S. Patent No. 3,198,531 to Brenneke

Claims 1 and 7 through 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Brenneke (U.S. Patent No. 3,198,531). Applicants respectfully traverse this rejection, as hereinafter set forth.

The Examiner cites Brenneke as disclosing a sleeve element for sealing between a piton and a core surface which comprises:

> a substantially annular body (Fig. 1) including an inner surface, an outer surface, a first end region (e.g. 20 and 18), and a second end region (e.g. 21 and 19);
>
> wherein at least a portion of the first end region of the annular body is configured to be biased laterally into a recess (32);
>
> at least one sealing feature (42); and

at least one depression (e.g., depression above element 42 and below element 30) wherein at least a portion of the at least one depression is sized, located and configured to lie over the at least one recess (Fig. 4) to provide increased lateral flexure for the biasing of the at least a portion of the first end region into the at least one recess (Fig. 4), the at least one depression positioned proximate to the at least one sealing feature (Fig. 4). (Office Action, page 6).

Applicants submit that Brenneke fails to describe all of the limitations of claim 1 of the presently claim invention.

Brenneke describes a piston ring (10) that includes a compression ring portion (18) and an oil ring portion (19) that are axially spaced and connected by a center portion (22). The compression ring portion has a projection (20) that extends radially inward into an upper channel of the ring groove and the oil ring portion has a projection (21) that extends into a lower channel of the ring groove. (Col. 2, line 57 – col. 3, line 13).

However, Applicants submit that Brenneke fails to describe a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface.*

Applicants further submit that Brenneke fails to describe at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region *and longitudinally spaced from the bearing surface.*

As such, Applicants submit that claim 1 is clearly allowable over Brenneke. Applicants further submit that claims 7 through 9 are also allowable at least by virtue of their dependency from an allowable base claim.

Applicants respectfully request reconsideration and allowance of claims 1 and 7 through 9.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 5,050,892 to Kawai et al., in View of U.S. Patent No. Re. 31,005 to Prasse et al.

Claims 4, 13, 91, 99, 101 through 104, and 108 through 112 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawai et al. (U.S. Patent No. 5,050,892), in view of Prasse et al. (U.S. Patent No. Re. 31,005). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 4, 13, 91, 99, 101 through 104, and 108 through 112 are improper at least because the references relied upon by the Examiner fail to teach or suggest all of the limitations of the presently claimed invention.

Claims 4 and 13

Claims 4 and 13 each depend from independent claim 1. The Examiner relies on Kawai as applied to claim 1 (discussed hereinabove) and then relies on Prasse as disclosing the subject matter of claims 4 and 13. The Examiner concludes that it would be obvious to combine the various teachings of Kawai and Prasse "to provide an annular body without any breaks to ensure a solid seal." (Office Action, page 8).

As set forth hereinabove, Applicants submit that Kawai fails to teach or suggest all of the limitations of claim 1. For example, Kawai fails to teach or suggest a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a

second end region, wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface*; and with at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region *and longitudinally spaced from the bearing surface*.

Applicants further submit that Prasse fails to remedy the shortcomings of Kawai. As such, Applicants submit that claims 4 and 13 are allowable at least by virtue of their dependency from an allowable base claim.

Applicants respectfully request reconsideration and allowance of claims 4 and 13.

Claims 91 and 99

Independent claim 91 is directed to a method of forming a seal between a bore surface and a piston element surface. As amended herein, the method of claim 91 comprises: providing a piston element having a surface; providing a bore having a surface; providing a sleeve element having an inner surface, an outer surface, an end region, and a sealing feature disposed generally within the end region; providing a depression in at least one of the inner surface and the outer surface of the sleeve element; providing a recess formed in one of the bore surface and the piston element surface; *disposing an energizer in the recess*; disposing the sleeve element between the piston element and the bore surface *such that at least a majority of the sleeve element is external to the recess*, wherein disposing the sleeve element between the piston element and the bore surface includes positioning at least a portion of the depression over the recess; and biasing at least a portion of the end region of the sleeve element into the recess and *contacting a surface of the at least a portion of the end region with the energizer*.

The Examiner cites Kawai as disclosing a method of forming a seal between a bore surface and a piston surface, wherein the method comprises:

providing a piston element (20) having a surface (22B);

providing a bore (30) having a surface (30a);

providing a sleeve element (10B) having an inner and outer surface (Fig. 5), an end region (either end region including elements 14), and a sealing feature (14) disposed generally within the end region;

providing a depression (13) in at least one of the inner surface and the outer surface of the sleeve element;

providing a recess (recess formed with surface 21) formed in one of the bore surface and the piston element surface (Fig. 5);

disposing the sleeve element between the piston element and the bore surface including positioning at least a portion of the depression over the recess (Fig. 5 and 6); and

biasing at least a portion of the end region of the sleeve element into the recess (Fig. 6). (Office Action, pages 8 and 9).

The Examiner then cites Prasse as disclosing stretching a plastic ring over a piston head and then shrinking the ring to its normal diameter. Applicants submit, however, that Kawai and Prasse fail to teach or suggest all of the limitations of claim 91 of the presently claimed invention.

The teachings of Kawai are discussed hereinabove. Prasse describes a plastic ring for internal combustion engines. In one embodiment, the ring is described as including a flat outer diameter adapted to engage the inner diameter of a compressing piston ring and an inner diameter adapted to engage the back wall of the ring groove. An axial groove slightly spaced from the outer diameter extends into the ring from the top thereof such that combustion gases expand the ring and act as a circumferential expander for the compression ring while preventing blowby gases through the ring groove. (See, e.g., Abstract; col. 3, line 67 – col. 4, line 37).

However, neither Kawai nor Prasse teach or suggest the presently claimed method as set forth in claim 91 including, for example: providing a recess formed in one of the bore surface and the piston element surface; *disposing an energizer in the recess*; disposing the sleeve element between the piston element and the bore surface *such that at least a majority of the sleeve element is external to the recess*; and biasing at least a portion of the end region of the sleeve

element into the recess and *contacting a surface of the at least a portion of the end region with the energizer.*

Applicants, therefore, submit that claim 91 is clearly allowable over Kawai and Prasse. Applicants further submit that claim 99 is also allowable at least by virtue of its dependency from an allowable base claim. Applicants respectfully request reconsideration and allowance of claims 91 and 99.

Claim 101 through 104 and 108

Independent claim 101 is directed to a sleeve element for sealing between a piston element surface and a bore surface disposed thereabout. As amended herein, the sleeve element of claim 101 comprises: a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, *the substantially annular body sized and configured to interferingly engage the piston element surface with the inner surface of the substantially annular body and maintain circumferential contact therebetween, wherein at least a portion of the outer surface is configured as a bearing surface*; wherein at least a portion of the first end region of the substantially annular body is configured to be biased laterally into at least one recess formed in the piston element surface; at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region and *longitudinally spaced from the bearing surface*, the at least one sealing feature being configured to be biased laterally into the at least one recess, the at least one sealing feature sized and configured to sealingly engage against the bore surface; and at least one depression formed in at least one of the outer surface and the inner surface of the substantially annular body, wherein at least a portion of the at least one depression is sized, located and configured to lie over the at least one recess to provide increased lateral flexure for the biasing of the at least a portion of the first end region into the at least one recess and *wherein the at least one depression is longitudinally disposed between the at least one sealing feature and the bearing surface.*

In rejecting claim 101, the Examiner relies on Kawai in a manner similar to the application of Kawai to other claims of the present application as set forth hereinabove. The Examiner further relies on Prasse as disclosing a plastic ring that interferingly engages a piston element.

The teachings of Kawai and Prasse are discussed hereinabove. Applicants submit that Kawai and Prasse fail to teach or suggest all of the limitations of claim 101. For example, Kawai and Prasse fail to teach or suggest a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, *the substantially annular body being sized and configured to interferingly engage the piston element surface with the inner surface of the substantially annular body and maintain circumferential contact therebetween, wherein at least a portion of the outer surface is configured as a bearing surface,* with the at least one sealing feature being *longitudinally spaced from the bearing surface*, and with at least one depression formed in at least one of the outer surface and the inner surface of the substantially annular body, *wherein the at least one depression is longitudinally disposed between the at least one sealing feature and the bearing surface.*

Applicants, therefore, respectfully submit that claim 101 is clearly allowable over Kawai and Prasse. Applicants further submit that claims 102 through 104 and 108 are allowable as being dependent from an allowable base claim as well as for the additional patentable subject matter introduced thereby.

For example, with respect to claim 102, Applicants submit that Kawai and Prasse fail to teach or suggest the sleeve element as set forth in claim 101, wherein the at least one sealing feature includes a surface protruding radially beyond a radial extent of the bearing surface.

Applicants respectfully request reconsideration and allowance of claims 101 through 104 and 108.

Claim 109 through 112

Independent claim 109 is directed to a sleeve element for sealing between a piston element surface and a bore surface disposed thereabout. As amended herein, the sleeve element of claim 109 comprises: a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, wherein the substantially annular body is configured as a continuous ring, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact*

with the other of the piston element surface and the bore surface; wherein at least a portion of the first end region of the substantially annular body is configured to be biased laterally in a first direction into at least one recess formed in one of the piston element surface and the bore surface; at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region and *longitudinally spaced from the bearing surface*, the at least one sealing feature being configured to be biased laterally into the at least one recess, the at least one sealing feature sized and configured to sealingly engage against the other of the piston element surface and the bore surface; and at least one depression formed in at least one of the outer surface and the inner surface of the substantially annular body, wherein at least a portion of the at least one depression is sized, located and configured to lie over the at least one recess to provide increased lateral flexure for the biasing of the at least a portion of the first end region into the at least one recess.

In rejecting claim 109, the Examiner relies on Kawai in a manner similar to the application of Kawai to other claims of the present application as set forth hereinabove. The Examiner further relies on Prasse as disclosing a plastic ring that interferingly engages a piston element.

The teachings of Kawai and Prasse are discussed hereinabove. Applicants submit that Kawai and Prasse fail to teach or suggest all of the limitations of claim 101. For example, Kawai and Prasse fail to teach or suggest a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface*; and with at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region *and being longitudinally spaced from the bearing surface*.

Applicants, therefore, respectfully submit that claim 109 is clearly allowable over Kawai and Prasse. Applicants further submit that claims 110 through 112 are allowable as being

dependent from an allowable base claim as well as for the additional patentable subject matter introduced thereby.

For example, with respect to claim 110, Applicants submit that Kawai and Prasse fail to teach or suggest the sleeve element as set forth in claim 109, wherein the at least one sealing feature includes a surface protruding radially in a second direction, opposite the first direction, beyond a radial extent of the bearing surface.

Applicants respectfully request reconsideration and allowance of claims 109 through 112.

Obviousness Rejection Based on U.S. Patent No. 3,198,531 to Brenneke, in View of U.S. Patent No. Re. 31,005 to Prasse et al.

Claims 101, 105 through 107, 109, and 113 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brenneke (U.S. Patent No. 3,198,531), in view of Prasse et al. (U.S. Patent No. Re. 31,005). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 101 and 105 through 107

The subject matter of independent claim 101 is discussed hereinabove. In rejecting claim 101, the Examiner relies on Brenneke in a manner similar to its application to other claims as discussed hereinabove. The Examiner further relies on Prasse as disclosing a plastic ring that interferingly engages a piston element.

The teachings of Brenneke and Prasse are discussed hereinabove. Applicants submit that Brenneke and Prasse fail to teach or suggest all of the limitations of claim 101. For example, Brenneke and Prasse fail to teach or suggest a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, *the substantially annular body being sized and configured to interferingly engage the piston element surface with the inner surface of the substantially annular body and maintain circumferential contact therebetween, wherein at least a portion of the outer surface is configured as a bearing surface,* with the at least one sealing feature being *longitudinally spaced from the bearing surface*, and with at least one depression formed in at least one of the outer surface and the inner surface of the substantially annular body, *wherein the at least one depression is longitudinally disposed between the at least one sealing feature and the bearing surface.*

Applicants, therefore, respectfully submit that claim 101 is clearly allowable over Brenneke and Prasse. Applicants further submit that claims 102 through 104 and 108 are allowable as being dependent from an allowable base claim as well as for the additional patentable subject matter introduced thereby.

For example, with respect to claim 102, Applicants submit that Brenneke and Prasse fail to teach or suggest the sleeve element as set forth in claim 101, wherein the at least one sealing feature includes a surface protruding radially in a second direction, opposite the first direction, beyond a radial extent of the bearing surface.

Applicants respectfully request reconsideration and allowance of claims 101 through 104 and 108.

Claims 109 and 113

The subject matter of independent claim 109 is discussed hereinabove. In rejecting claim 109, the Examiner relies on Brenneke in a manner similar to its application to other claims as discussed hereinabove. The Examiner further relies on Prasse as disclosing a plastic ring that interferingly engages a piston element.

The teachings of Brenneke and Prasse are discussed hereinabove. Applicants submit that Brenneke and Prasse fail to teach or suggest all of the limitations of claim 109. For example, Brenneke and Prasse fail to teach or suggest a sleeve element having a substantially annular body including an inner surface, an outer surface, a first end region, and a second end region, wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface, *wherein at least a portion of at least one of the inner surface and the outer surface is configured as a bearing surface oriented to face at least one of the piston element surface and the bore surface, and wherein a portion of the other surface of the inner surface and the outer surface is sized and configured to maintain circumferential contact with the other of the piston element surface and the bore surface*; and with at least one sealing feature formed on the substantially annular body proximate to the at least a portion of the first end region *and being longitudinally spaced from the bearing surface.*

Applicants, therefore, respectfully submit that claim 109 is clearly allowable over Brenneke and Prasse. Applicants further submit that claim 113 is allowable at least by virtue of its dependency from an allowable base claim.

Applicants respectfully request reconsideration and allowance of claims 109 and 113.

Objections to Claims 62 and 63/Allowable Subject Matter

Claims 62 and 63 stand objected to as being dependent upon rejected base claims, but are indicated to contain allowable subject matter and would be allowable if placed in appropriate independent form.

Each of claims 62 and 63 depend, ultimately, from claim 49. As set forth hereinabove, Applicants submit that claim 49 is in condition for allowance. As such, Applicants submit that claims 62 and 63 are likewise in condition for allowance.

Rejoinder

Upon allowance of independent claim 1 rejoinder and allowance of claims 5 and 10 through 12, which depend directly or indirectly therefrom, is respectfully requested as allowed by M.P.E.P. § 821.04(a). Similarly, upon allowance of independent claim 49 rejoinder and allowance of claims 56, 61, and 64 through 68, which depend directly or indirectly therefrom, is respectfully requested. Likewise, upon allowance of independent claim 91 rejoinder and allowance of claims 93, 94, 97, 98 and 100, which depend directly or indirectly therefrom, is respectfully requested.

ENTRY OF AMENDMENTS

The amendments to claims 1, 2, 49, 50, 62, 91, 94, 101, 102, 107, 109, 110 and 115 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application.

Support for the amendments to claims 1, 101 and 109 may be found, for example, at paragraphs [0050] through [0058] of the as-filed application. Support for amendments to claims 2, 102 and 110 may be found, for example, at paragraphs [0059] and [0060]. Support for amendments for claims 49, 91 and 94 may be found, for example, in previously pending claims 62, 96 (i.e., prior to the amendments herein), FIGS. 1F through 1M and related description set forth in the as-filed application. Amendments to claims 50 and 115 correct errors in the text.

CONCLUSION

Claims 1 through 13, 49 through 51, 54 through 69, 91, 93, 94 and 97 through 130 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,

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